

influence of the work function of the second cathode or by the insufficient film thickness of the second cathode.

The transmittance was decreased with the change in film thickness of the first cathode, the acceptable level was up to approximately 90 angstroms (a total thickness of the first and the second cathodes of 100 angstroms), and at a level of the thickness of the first cathode higher than that mentioned above (a level higher than that of a total thickness of the first and the second cathodes of 100 angstroms), the transmittance was excessively decreased. According to the results described above, it was believed that a film thickness of approximately 70 angstroms of the first cathode was an optimum value.

(Example 4)

Organic EL devices were formed in a manner similar to that in Example 1 except that the second cathodes were formed so as to have thicknesses of 5, 15, 20, 25, and 40 angstroms. The threshold voltages and the transmittances at a wavelength of 550 nm were measured for the individual organic EL devices. In Table 3, the results of the threshold voltages and the transmittances are shown together with the results of Example 1 (the second cathode having a film thickness of 10 angstroms).

Table 3

	Film Thickness of	10	15	20	25	40
	Second Cathode	(Å)	(Å)	(Å)	(Å)	(Å)

	5 (Å)					
Threshold voltage (V)	No Light Emission	3	3.1	3	3	3
Transmittance (%, at 550 nm)	57	54	49	43	32	20

Concerning the threshold voltage, when the thickness thereof was 10 angstroms or more, the change could not be observed. When the thickness is 10 angstroms or less, it is believed that light emission was not performed since conductance could not be obtained. Since a constant value was obtained, it was believed that there was no influence of the work function of the second cathode. A decrease in transmittance was significant compared to the case in which Ca was used. It is believed that the phenomenon was caused by Al which had high conductivity and high reflectance.

As has been thus described in detail, according to the present invention, the transmittance in the visible region is improved, sealing defects are reduced, and the influence of oxygen, water, and the like in the outside air can be avoided as much as possible. In addition, as a transmissive type organic EL device, a device can be realized which has a long life, is driven at a low voltage, and has a high transmittance in the visible light region.